

ELECTROMYOGRAPHY SYSTEM

ABSTRACT OF THE DISCLOSURE

A method of determining relative neuro-muscular response onset value
5 thresholds for a plurality of spinal nerves, comprising: depolarizing a portion of the patient's
cauda equina; and measuring the current intensity level at which a neuro-muscular response
to the depolarization of the *cauda equina* is detected in each of the plurality of spinal nerves.

A method for detecting the presence of a nerve adjacent the distal end of at
least one probe, comprising: determining relative neuro-muscular response onset values for a
10 plurality of spinal nerves; emitting a stimulus pulse from a probe or surgical tool; detecting
neuro-muscular responses to the stimulus pulse in each of the plurality of spinal nerves; and
concluding that the electrode disposed on the distal end of the at least one probe is positioned
adjacent to a first spinal nerve when the neuro-muscular response detected in the first spinal
nerve is detected as a current intensity level less than or equal to a corresponding neuro-
15 muscular response onset value of the first spinal nerve.

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